

SOIL MOISTURE SUMMARY

October 1, 2002

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Soil moisture conditions at the end of September were generally above normal across far southern and parts of central Illinois, but much of south-central Illinois was well below normal.

Above average precipitation fell across parts of southern Illinois in September; however, most of Illinois received below average rainfall. Spotty, heavy to light rainfall occurrences were typical in Illinois during summer 2002. As a result, soil moisture conditions in the state at the end of September varied greatly from north to south and with depth (Figure 1). In the 0- to 6-inch layer, soils were generally dry across the northwestern third of the state and wet in the far south. In the 6- to 20-inch layer, above normal soil moisture conditions were observed near Dixon Springs and Monmouth, but dry conditions dominated south-central Illinois. In the 20- to 40- and 40- to 72- inch layers, soil moisture was above normal in west-central, east-central, and far southeastern Illinois, but below normal in northeastern Illinois and very dry over parts of southern Illinois. Maximum moisture amounts were found at Dixon Springs within all layers (125 - 175 percent of normal), while driest areas were located from Belleville to Olney in the two deepest layers (10 to 50 percent of normal). Overall, soil moisture in Illinois at the end of September was below normal (Figure 2).

Compared to last month, soil moisture generally decreased across northern Illinois and increased in the south. In the 0- to 6-inch layer, largest decreases (40 percent) occurred from Freeport to Perry, while largest increases (100 - 200 percent) were observed from Belleville to Dixon Springs. In the 6- to 20-inch layer, sites in northern Illinois reported moisture decreases of 10 - 40 percent. Southern Illinois showed moisture increases on a slightly smaller scale, except for a 150 and 300 percent increase at Dixon Springs and Belleville, respectively. Changes in the 20- to 40-inch layer were generally small and negative, except for a 36 percent increase at Dixon Springs.

Extended climate outlooks issued by the U.S. Department of Commerce, National Oceanic and Atmospheric Administration, Climate Prediction Center for October call for equal chances of above, below, and normal temperatures and precipitation. The outlook for October-December calls for a slight chance of above normal temperatures in northern Illinois, equal chances of above, below, and normal precipitation statewide.

Table 2. Soil Moisture in Various Layers on October 1, 2002

<i>Location</i>	<i>Oct 1 0 - 6 (inches)</i>	<i>Change from Sep 1 (%)</i>	<i>Oct 1 6 - 20 (inches)</i>	<i>Change from Sep 1 (%)</i>	<i>Oct 1 20 - 40 (inches)</i>	<i>Change from Sep 1 (%)</i>
Freeport (NW)	1.0	-43	2.7	-39	6.2	-11
DeKalb (NE)	1.4	-15	3.3	-28	5.7	-4
Monmouth (W)	1.3	-20	4.0	-13	6.3	-3
East Peoria (C)	1.0	-44	3.8	-23	6.8	-13
Topeka (C)	0.6	-40	1.8	-32	2.8	-9
Stelle (E)	1.4	2	3.6	-23	5.0	-4
Champaign (E)	1.4	-16	4.4	-13	5.7	-7
Bondville (E)	1.6	-11	3.9	-12	7.1	-5
Perry (WSW)	1.1	-37	3.6	-28	6.9	-7
Springfield (WSW)	1.6	-7	4.1	-11	6.5	-2
Brownstown (ESE)	0.9	38	1.9	13	6.1	0
Olney (ESE)	1.2	38	3.3	2	6.3	-2
Belleville (SW)	1.3	112	1.3	299	4.7	-9
Carbondale (SW)	1.9	187	2.1	41	5.1	-10
Ina (SE)	1.5	47	4.3	15	7.3	-1
Fairfield (SE)	1.3	68	3.5	12	6.5	-3
Dixon Springs (SE)	2.4	217	5.4	153	7.7	36

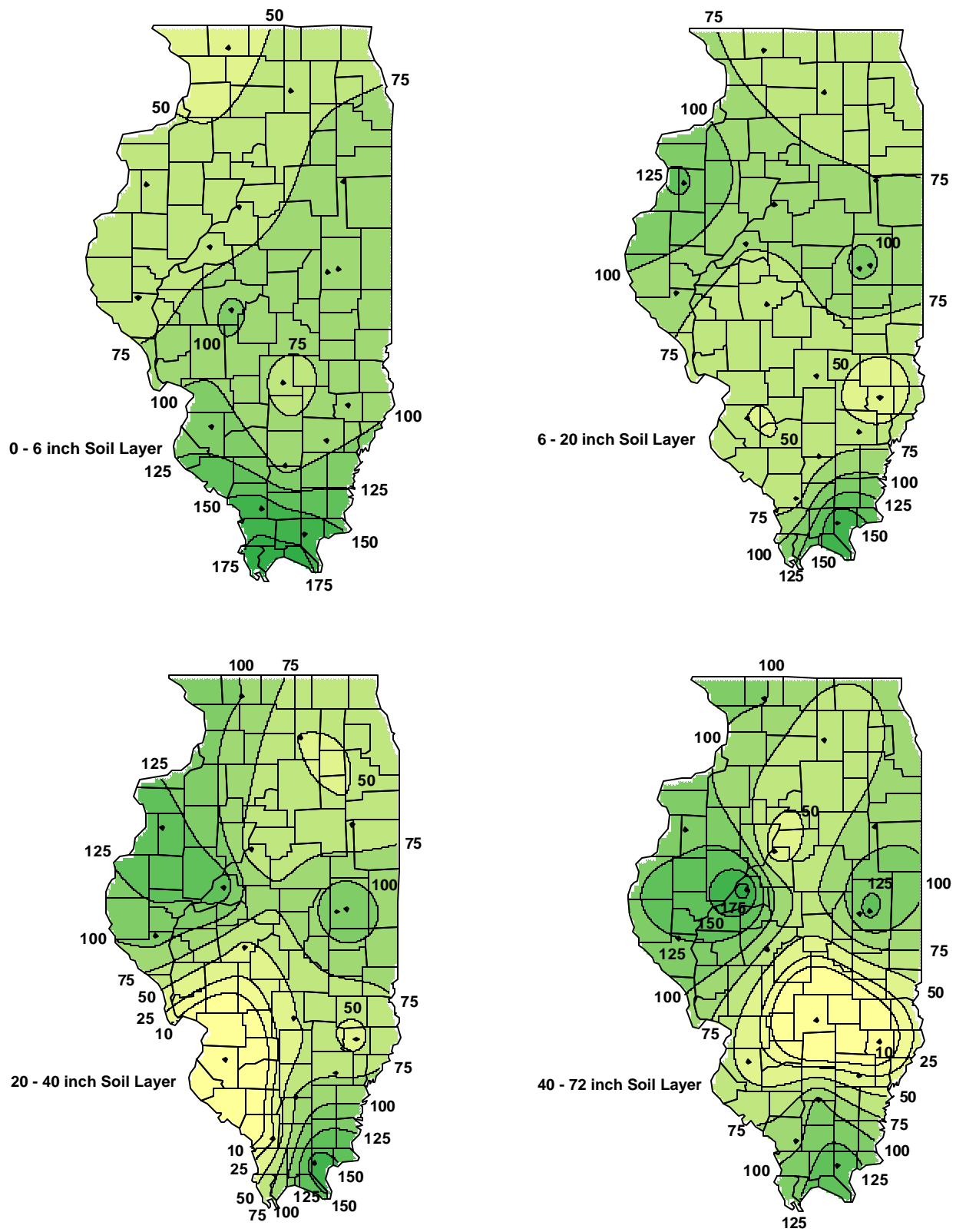


Figure 1. October 1, 2002 observed percent of normal soil moisture based on 1985-1995 mean.

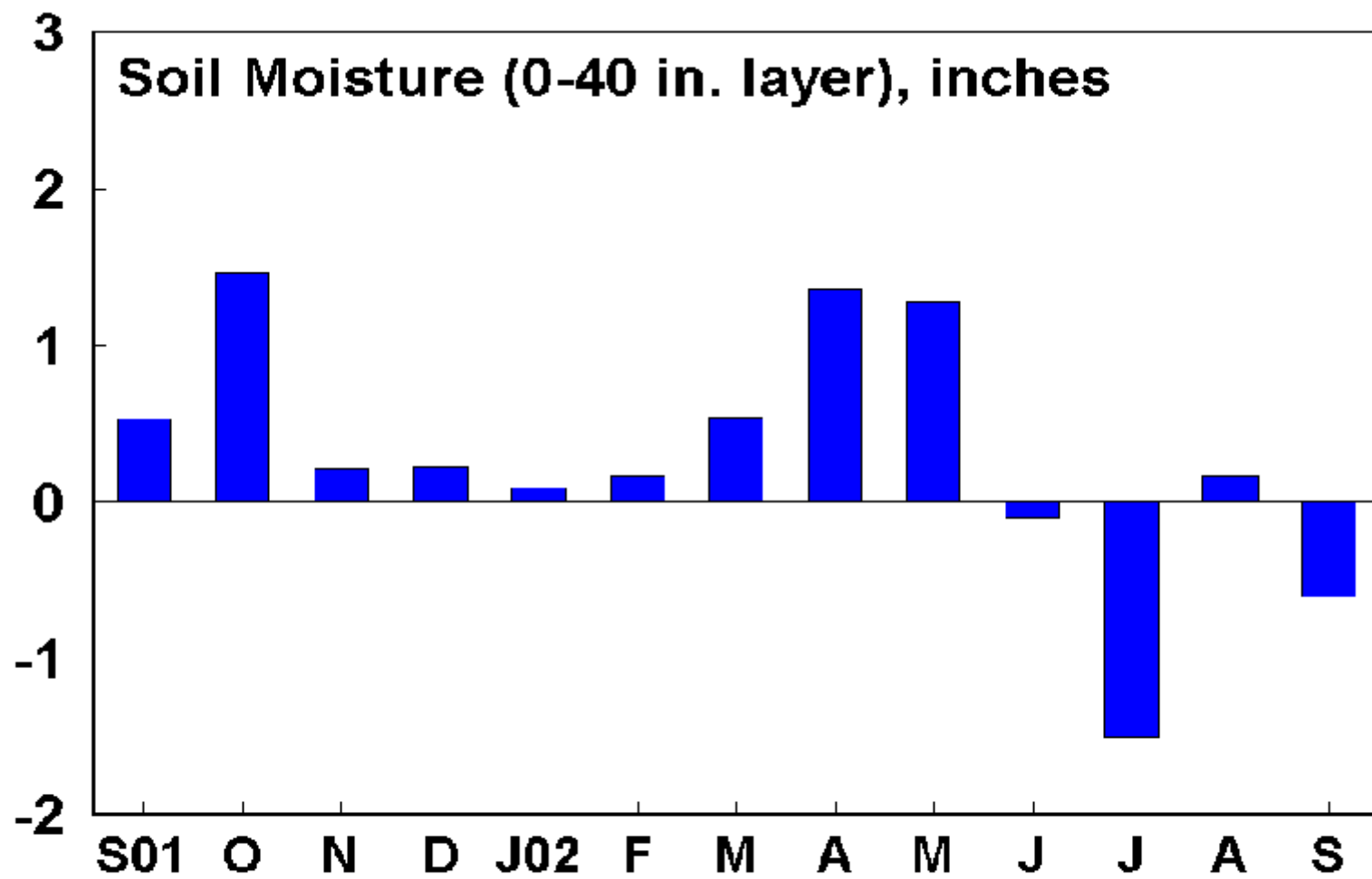


Figure 2. Illinois departures from normal (1985 - 1995 mean).